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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,259	01/23/2002	Yoshiaki Shimooka	218357US2	1941

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EXAMINER

LE, THAO P

ART UNIT	PAPER NUMBER
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2818

DATE MAILED: 04/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/052,259		SHIMOOKA ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Thao P Le		2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 13-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 and 13 is/are allowed.
- 6) ☒ Claim(s) 14-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5</u> . | 6) <input type="checkbox"/> Other: _____                                    |

DETAILED ACTION

**Priority**

1. Acknowledge is made of applicants' claim for foreign priority base on an application 2001-372974 filed in Japan on 12/06/2001.

It is noted that Applicants have filled a certified copy of said application as required by U.S.C 119, which papers have been placed of record in the file.

***Oath/Declaration***

2. The oath/declaration filed on 04/02/02 is acceptable.

***Election/Restriction***

3. Application's election **without traverse** of Group I (Claims 1-6) in Paper No. 8 drawn to a semiconductor device is acknowledged. Applicants have the right to file a divisional, continuation or continuation-in-part application covering the subject matter of the non-elected claims. The newly added Claims 13-18 are classified in the same class and subclass with Group I. Therefore, claims 1-6 and 13-18 are present active in this application for examination.

4. Claims 1 and 4 have been amended in Paper No. 8 is acknowledged.

***Information Disclosure Statement***

5. This office acknowledges of the following items from the Applicant:

Information Disclosure Statement (IDS) filed on **April 15, 2002** and made of record as Paper No. 5. The references cited on the PTOL 1449 form have been considered.

***Specification***

6. The specification is objected to for the following reason: The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed (see MPEP § 606.01). **Note that, the claims are directed to semiconductor device instead of to a method of making a semiconductor device.**

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Allowable Subject Matter***

7. Claims 1-6 and 13 are allowed.

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8. Claims 1-6 and 13 are considered allowable since none of prior art teach or suggest claimed limitations having a semiconductor device including a signal line and a differential signal line whereas the signal line and the differential signal line are laminated via an insulating layer so as to be substantially in parallel with each other and an actual wiring length  $l$  of the signal line is longer than a wiring length  $l_0$  determined by the equation:

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 18 recites the limitation "the frequency" in claim 14. There is insufficient antecedent basis for this limitation in the claim.

**Claim Rejections**

***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent,

except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application **filed before November 29, 2000**. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

12. Claims 14-15 are rejected under 35 USC 102 (b/e) as being anticipated by Forbes et al., U.S. Patent No. 6,373,740.

Regarding to claim 14, Forbes et al. discloses the semiconductor device comprising at least two signal lines 470, each capable of passing a first signal, formed in the same layer above a semiconductor substrate (Fig. 4G), first differential signal lines 450 through which a signal in opposite phase to the first signal passes, or which is connected to a ground power supply, and the signal lines and the first differential signal lines being laminated via an insulating layer 460 so to be parallel with each other (Figs. 4G-4I).

### **Claim Rejections - 35 USC § 103**

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forbes, U.S. Patent No. 6,373,740.

Regarding to claims 15, 18, the width of the signal lines and differential lines or the frequency of the signal line would have been a matter of design choice.

Regarding to claims 16-17, it would have been well known in the art to form a second differential lines at sides opposite to those of the first differential signal lines and the signal lines and the differential lines are in parallel with each other in order to prevent the influence of interference between signal lines (4G-4I).

### ***Conclusion***

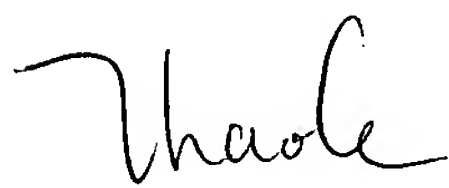
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao P. Le whose telephone number is 703-605-1187. The examiner can normally be reached on Monday-Thursday 7:30am-6: 30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 703-308-4910. The fax phone numbers for the

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organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Thao Phuong Le  
Examiner



HOAI HO  
PRIMARY EXAMINER